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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/619,827      | 07/15/2003  | Lee D. Tice          | SYS-P-1130          | 7197             |

7590 11/25/2005  
PATENT SERVICES GROUP  
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EXAMINER

CHARIOUI, MOHAMED

ART UNIT PAPER NUMBER

2857

DATE MAILED: 11/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/619,827

Applicant(s)

TICE, LEE D.

Examiner

Mohamed Charioui

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 10-19, 24-35 and 39-65 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-19, 24-35 and 39-65 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 2857

1. Applicant cancelled claims 1-9, 20-23 and 36-38.

### **DETAILED ACTION**

#### ***Claim Objections***

2. **Claim 12** is objected to because of the following informalities: claim 12 recites the limitation "the amount of averaging" in page 2, line 16 of the amendment. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claim 13** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "removes less noise" in claim 13 is a relative term which renders the claim indefinite. The term " removes less noise" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is unclear how much noise is considered to be less noise.

#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2857

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 10-19, 24-35 and 39-58** are rejected under 35 U.S.C. 102(b) as being anticipated by Tice (U.S. 6,229,439).

**As per claims 10, 11 and 24**, Tice teaches at least a first sensor generating an output representative of the sensed environmental condition, the output including noise that is not representative of the sensed environmental condition (see col. 1, line 65 to col. 2, line 15); a processor and executable instructions that process and average the sensor's output to remove at least some of noise and produce a processed signal where the degree of averaging is altered as a function of time in response to at least one of the output or the signal, and including instructions to evaluate the processed signal (see col. 2, line 45 to col. 3, line 6 and col. 11, lines 6-12).

**As per claims 12, 13, 16 and 18**, Tice further teaches that the amount of averaging has a minimum value (see col. 3, lines 1-5 and col. 4, lines 25-32).

**As per claim 14**, Tice further teaches that the degree of averaging increases over time when the output is not significantly changing (see col. 5, line 65 to col. 6, line 8).

**As per claims 15 and 17**, Tice further teaches that the degree of averaging is clamped at a maximum value (see col. 11, lines 13-43).

**As per claim 19**, Tice further teaches that the sensor is at least one of a gas sensor, a smoke sensor, a temperature sensor, a light sensor, a pressure sensor, a position sensor, or a humidity sensor (see col. 2, lines 20-26).

**As per claims 25, 32 and 33**, Tice further teaches a display, coupled to the control circuitry, which displays information pertaining to the received signal (see col. 5, lines 47-55).

**As per claims 26-29**, Tice further teaches executable instructions to maintain the altered sample rate until the timer times out (see col. 10, line 49 to col. 11, line 13).

**As per claims 30, 31, 34 and 35**, Tice further teaches an ambient condition sensor coupled to the signal input (see col. 1, line 65 to col. 2, line 5).

**As per claims 39-43, 45 and 46**, Tice further teaches establish at least a second degree of averaging with the second degree less than the degree of averaging (see col. 11, lines 1-12).

**As per claim 44**, Tice further teaches that the second degree of averaging is maintained for a selected time interval before the degree of averaging is increased (see col. 11, lines 12-22).

**As per claims 47-51**, Tice further teaches instructions for sampling a noisy signal, instructions for establishing an average noise parameter for the signal (see col. 1, line 65 to col. 2, line 15 and col. 10, line 49 to col. 11, line 21); instructions for updating a parameter indicative of a number of signal samples to be used in averaging the sensor's output; instructions for forming the average of the sensor's output (see col. 1, lines 35-43); instructions for comparing the averaged sensor output value to a representation of the average noise parameter, and responsive thereto, including further instructions for altering a sample rate parameter and for altering the number of signal

Art Unit: 2857

samples used averaging the sensor's output (see col. 5, lines 43-49 and col. 6, lines 57-63).

**As per claim 52**, Tice further teaches a display, coupled to the processor, which displays information pertaining to the received signal (see col. 5, lines 47-55).

**As per claims 53-56**, Tice further teaches executable instructions to maintain the altered sample rate until the timer times out (see col. 10, line 49 to col. 11, line 13).

**As per claims 57 and 58**, Tice further teaches the sensor comprises a sensor of a selected fluid (see col. 1, line 65 to col. 2, line 5).

**As per claims 59-65**, Tice further teaches control circuitry coupled to at least the input, the circuitry including first software that samples a received signal at the first rate, forming an average signal based on a first number of samples, and a second software that evaluates variability of the received signal and simultaneously alters both the sample rate and the number of samples in response thereto (see col. 9, lines 10-34).

### ***Response to Arguments***

5. Applicant's arguments filed 9/20/05 have been fully considered but they are not persuasive.

Applicant argues that Tice does not teach "wherein the degree of averaging is altered as a function of time in response to at least one of the output or the signal, and including instructions to evaluate the processed signal."

Tice teaches that the degree of averaging is function of both the time and the sensors responses (see col. 8, lines 28-57 and the equations in col. 8, lines 14-18). Therefore The Examiner disagrees with the applicant arguments.

***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

**Contact information**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohamed Charioui whose telephone number is (571) 272-2213. The examiner can normally be reached Monday through Friday, from 9 am to 6 pm.

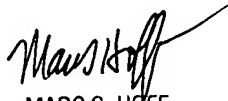
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S Hoff can be reached on (571) 272-2216. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2857

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mohamed Charioui

11/14/05

  
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